DOCUMENT RESUME

ED 415 454 CG 028 224

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TITLE The Therapeutic Factors Inventory: Development of a Scale.
PUB DATE 1997-08-00
NOTE 12p.; Paper presented at the Annual Meeting of the American Psychological Association (105th, Chicago, IL, August 15-19, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS College Students; *Counseling Effectiveness; Counseling Techniques; Factor Analysis; Group Counseling; Higher Education; *Outcomes of Treatment; *Test Construction; Test Validity
IDENTIFIERS *Therapeutic Factors Inventory

ABSTRACT

Although Yalom's framework of "therapeutic factors" for facilitating outcomes in group work has been accepted by psychologists, no empirically based instrument assesses all of these factors in one measure. The Therapeutic Factors Inventory (TFI), which is described here, was created to fill this need. In designing this measure, the literature was reviewed to establish a context. The factors were then defined based upon Yalom's theory and items were generated. To test the scale, 77 college students from 3 different geographical regions--of which 33 had been in group sessions longer than 8 sessions and 27 had been in group for 5 to 8 sessions--were administered the measure. Results indicate that the items contained strong internal consistency, reflecting reliable measurements of the therapeutic principles as defined here and by Yalom. However, many of the 11 factors were found to correlate significantly with each other which may reflect overly inclusive factors or measurement errors. It is suggested that given the systematic scrutiny Yalom's theory has undergone, that the intercorrelation of therapeutic factors may not imply that the concepts are meaningless, but that they are meaningless in isolation. (RJM)

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ED 415 454

The Therapeutic Factors Inventory: Development of a Scale

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(1997, August). Poster session presented at the 105th Annual Convention of the American Psychological Association, Chicago, IL.

Abstract

Although Yalom's (1995) framework of "therapeutic factors" facilitating outcome in group has been accepted by psychologists specializing in group work, no empirically based instrument assesses all of these factors in one measure. The Therapeutic Factors Inventory (TFI) has been designed to fill this gap in the literature. The TFI include 11 scales based on the therapeutic factors. The poster summarizes the development, psychometric evaluation, and subsequent revision of the TFI scale. Each scale of the instrument demonstrates high internal consistency. However, many of the scales were found to correlate significantly with one another. Implications of these findings for Yalom's theory and the instrument are discussed.

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Introduction

Yalom's articulation of the therapeutic factors that operate in group therapy includes eleven elements thought to beneficially affect client growth. Despite the widespread popularity of this concept, research on the therapeutic factors has suffered several problems. Decades have passed with many researchers investigating the therapeutic factors, yet still there is "a general failure to establish direct links between process variables and clinical improvement" (Dies, 1993, p. 502). Replication of group research has been rare. Definitions of the factors have been imprecise and variable, leading to research that is often unclear and inconclusive (Bednar & Kaul, 1994; Crouch, Bloch, & Wanlass, 1994).

Measurement of the factors

Yalom's (1995) Q-sort is the most widely used approach to measuring the therapeutic factors. Sixty statements assess 12 therapeutic factors. Group members rank each statement according to which is most helpful to them. Each statement is rated with a seven-point scale ranging from most to least helpful.

Unfortunately, because Yalom's (1995) text provides no psychometric information about the Q-sort, it is difficult to judge its reliability. Other instruments are available, assessing specific factors (Stockton, Rohde, & Haughey, 1990; Budman et al., 1987), reanalyzing the factor constellation (Kellerman, 1987; Murillo, Shaffer, & Michael, 1981; Stone, Lewis, & Beck, 1994), examining single session impact (Kivlighan, Multon, & Brossart, 1996) or rating group climate as a whole (e.g., Silbergeld, Koenig, Manderscheid, Meeker, & Hornung, 1975; MacKenzie, 1983). However, there is no established instrument with psychometric support that assesses the presence of all of Yalom's therapeutic factors in a given group.

The Therapeutic Factors Inventory (TFI) was designed to provide a comprehensive, empirically-based measure to assess therapeutic factors in a specific group. Scales of the TFI correspond to Yalom's therapeutic factors. These scales include Instillation of Hope, Universality, Imparting Information,

Altruism, Recapitulation of the Family System, Development of Socializing Techniques, Imitative Behavior, Interpersonal Learning, Cohesiveness, Catharsis, and Existential Factors.

Method

The literature was reviewed to ascertain the available scales assessing therapeutic factors, the psychometric properties of each scale, and whether a need for a comprehensive scale measuring all therapeutic factors exists. All relevant, available, and psychometrically adequate scales were collected. Yalom (October 21, 1996; personal communication) and MacKenzie (October 21, 1996; personal communication) were consulted during this stage. No psychometrically validated instrument was found assessing all of the therapeutic factors described by Yalom's (1995) theory. It was concluded that a need existed for a psychometrically validated instrument assessing Yalom's model of the therapeutic factors.

Development and evaluation of the TFI

Factors were defined based upon Yalom's theory, and items were generated. To ensure scale content was appropriate and representative, doctoral-level psychologists with specializations in group psychotherapy generated a pool of 174 items. Items were assessed along a 7-point Likert-type scale rated from 1 (strongly disagree) to 7 (strongly agree). Items were randomized, and a selection of items in each of the scales was reverse-coded.

Procedures. Participants were college students in counseling and support groups at university counseling centers in three major universities in different regions of the country. In order to maximize generalizability, participation was requested in groups of varying formats. Group leaders explained the project to members. Packets including an informed consent form, the TFI and a brief information sheet, was distributed. A Manova was performed to assess for differences between the three counseling center settings. No significant differences were found [$F(22, 96)=1.65$, $p>.05$, Hotellings=.76 between setting].

Participants. Seventy-seven students agreed to participate. Approximately three-quarters of the sample (59) were female. Seventy of the participants defined themselves as Anglo; 1 was African American, 4 were Hispanic/Latino, and 1 reported as Other. The majority of participants (33) had participated in group for longer than 8 sessions. Twenty-seven participants had been in group for 5-8 sessions, and 17 had been group members for 2-4 sessions.

Item analysis. Results were compiled and item analysis completed. Statistical analysis of empirical data were conducted to measure internal consistency of items. The items with the highest average intercorrelations were retained. This process increases test validity when the scale measures a single trait (Anastasi, 1988).

Results

Internal consistency. We removed items with the lowest item-total correlations. The resulting instrument had nine items per scale. Scale factor scores and coefficient alphas (Cronbach, 1951) were run on each scale. Table 1 provides the coefficient alphas calculated after deleting items with the lowest scale correlations. The coefficient alphas ranged from .82 (recapitulation of family system) to .94 (cohesiveness).

Between-scale correlations. Correlations between scales were performed to study the relationships between scales. Because the chance of familywise error increases unacceptably when many correlations are run simultaneously, a Bonferroni adjustment was made. By dividing the significance level by number of variables, an overall alpha level of .05 is maintained (.05 divided by 11 = .004). Table 2 summarizes the intercorrelations between scales. Altruism, Catharsis, Cohesiveness, Existential Factors, Hope, Imitative Behavior, Interpersonal Learning, Socializing Techniques, and Universality all correlated significantly with one another. In addition, Imparting Information correlated significantly with Altruism, Catharsis, and Universality. Recapitulation of Family correlated significantly

with Existential Factors, Hope, Imitative Behavior, Interpersonal Learning, Socializing Techniques, and Universality.

Discussion

With strong internal consistency obtained in the analyses, the current study provided qualified support for the TFI. Because internal consistency measures homogeneity as a form of reliability, results of the current study reflected reliable measurement of the therapeutic principles as defined in this paper and by Yalom (1995). In addition, some generalizability could be assumed given the variety of therapy groups tested and the fact that participants came from three different regions of the country.

Intercorrelations

Many of the scales correlated significantly with one another. Several possible interpretations exist for the intercorrelations of the scales. One possibility is that the therapeutic factors as defined by Yalom (1995) and this paper could be meaningless concepts. The factors could be so overly inclusive that significant differences between them are negated. Alternatively, measurement errors could explain the intercorrelations between the scales.

Finally, the therapeutic factors could be distinct entities, but could correlate significantly because they occur in clusters. Yalom (1995) observes that the therapeutic factors are interrelated by definition: "Universality, like the other therapeutic factors, does not have sharp borders; it merges with other therapeutic factors (p. 7)." Furthermore, he contends that some therapeutic factors may be prerequisites for other therapeutic factors to function. Given that overlap between factors is an aspect of Yalom's theory, the intercorrelations may be unavoidable if using his definitions.

Utility of the theory. The logical question that follows is whether the factors, and the scales this instrument measures, are meaningful and useful despite the intercorrelations. Given the systematic observation Yalom has undergone over decades of clinical and research experience (Bednar & Kaul, 1994), as well as the practical utility of Yalom's system, these authors believe that his system has great value. It has previously been observed that group

research often defines one aspect of process in isolation, leading to an effort that teaches us little about the interrelatedness of variables (Fuhriman & Burlingame, 1994). Perhaps recognizing that variables are related, and measuring them in a way that reflects this, is not by definition problematic. If so, the intercorrelation of therapeutic may not necessarily imply that the concepts are meaningless, but that they are meaningless in isolation.

Limitations of the current study and future directions

The development of the TFI has a strong beginning. Solid methods of item construction and deletion provide preliminary reliability and validity evidence. Samples were drawn from three different geographic regions to improve generalizability.

However, to conclusively establish reliability and validity, further research will be necessary. External validity is the next logical step for the development of the TFI. Testing other psychological samples would increase the generalizability of the instrument. With a larger sample, factor analysis would provide support for or refute the theory underlying the scale factors. Furthermore, establishing test-retest reliability will also be an important step in the TFI development process.

In the authors' perspectives, the most confirming empirical evidence for Yalom's factors and the TFI would come from measuring client outcome in group as it relates to the client's perspective of the therapeutic factors. From a pragmatic viewpoint, the most valuable research involving the TFI could investigate the applied utility of the instrument. The TFI may also be used to investigate clinical properties of therapy groups.

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Table 1

Reliability Analyses of TFI Subscales

Subscale	Mean	Standard Deviation	Coefficient Alpha
Altruism	50.90	7.58	.88
Catharsis	51.23	7.51	.83
Cohesiveness	54.91	7.56	.94
Existential	46.81	8.05	.83
Hope	48.41	9.16	.93
Imitative	42.19	9.40	.88
Information	42.22	9.02	.85
Interpersonal	47.57	8.98	.88
Recapitulation	41.07	9.65	.82
Socializing	49.89	8.81	.92
Universality	51.21	7.98	.86

Note: Imitative = Imitative Behavior
Recapitualtion = Recapitulation of Family System
Socializing = Development of Socializing Techniques

Table 2

Intercorrelations of TFI Scales

	Altru	Cathar	Cohes	Exis	Hope	Imitat	Impart	Interp	Recap	Soc	Univ
Altruism	1.00	.61*	.69*	.68*	.74*	.70*	.36*	.79*	.32	.71*	.64*
Catharsis	--	1.00	.63*	.49*	.55*	.43*	.42*	.56*	.33	.50*	.55*
Cohesion	--	--	1.00	.42*	.54*	.44*	.22	.50*	.18	.37*	.67*
Existential Factors	--	--	--	1.00	.82*	.57*	.21	.77*	.44*	.71*	.68*
Hope	--	--	--	--	1.00	.67*	.24	.80*	.45*	.72*	.71*
Imitative Behavior	--	--	--	--	--	1.00	.30	.74*	.40*	.70*	.59*
Imparting Information	--	--	--	--	--	--	1.00	.27	-.01	.20	.14
Interpersonal Learning	--	--	--	--	--	--	--	1.00	.59*	.87*	.63*
Recapitulation of Family	--	--	--	--	--	--	--	--	1.00	.51*	.39*
Socializing Techniques	--	--	--	--	--	--	--	--	--	1.00	.59*
Universality	--	--	--	--	--	--	--	--	--	--	1.00

* $p < .004$